Customer Care Solutions
Technical Documentation

# *SERVICE MANUAL*

# RH-20
# Cellular Phones

***NMP Part No: Original 0275899***

**COMPANY CONFIDENTIAL**

NOKIA

Issue 1 10/2003

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## Amendment Record Sheet

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## Nokia RH-20 Service Manual Structure

1. General Information
2. Parts List
3. Service SW Instructions and Service Concepts
4. Service Tools
5. Disassembly and Assembly Instructions
6. Troubleshooting
7. System Module & User Interface

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## IMPORTANT

**This document is intended for use by qualified service personnel only.**

## Company Policy

Our policy is of continuous development; details of all technical modifications will be included with service bulletins.

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While every endeavour has been made to ensure the accuracy of this document, some errors may exist. If any errors are found by the reader, NOKIA CORPORATION should be notified in writing.

Please state:

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Latest Amendment Number (if applicable)

Page(s) and/or Figure(s) in error

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## Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

**Warnings:**

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/ MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

**Cautions:**

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Ensure solder, wire, or foreign matter does not enter the telephone as damage may result.
4. Use only approved components as specified in the parts list.
5. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment. Ensure all cables and wires are repositioned correctly.

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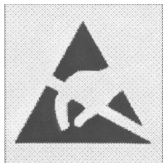
# ESD Protection



Nokia requires that phone repair places have sufficient ESD protection (against static electricity) when servicing cellular phones.

A cellular phone, which is ready for use, can be handled normally without ESD protection. The SIM card and battery can be replaced in normal conditions of use.

To replace the color cover ESD protection must be applied, except for the phone covers which can be replaced by the customer.

All electronic parts of the phone , including the display, are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the phone or handling the phone components must be done under ESD protection.

ESD protected spare part packages MUST NOT be opened/closed out of an EPA.

For more detailed information about ESD protection and EPA, contact your local Nokia After Market Services representative.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